

# Work Order ID 56805

March 10, 2010 1:29:51 PM



Page 1

Item ID: D350-591-121

Accept

Revision ID:

Item Name: Heli-Access-Step, LH

Start Date: 10/03/2010 Start Qty: 5.00

Required Date: 18/03/2010 Req'd Qty: 5.00

Reference:

Cust Item ID:

Customer:

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run

Start

Stop

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Draw  
Number

Draw  
Rev.

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

Draw Nbr

Revision Nbr

D2351

Rev E

100



DC

Document Control

DOCUMENT CONTROL

Memo

Photocopy bluefile and type labels as per PPP D350-591-121 CHG005

Spot Labels on plans 8/24/15

0.00

0.00

HF Cor B6 10/04/12

8/24/15

110



Large Fab

Large Fab

Large Fab

Memo

1-Cut D2244-116 extrusion to 55.32" long as per Dwg D2351 using cutting table setup DT8185-G

2-Drill extrusion per Dwg D2351 using Jig DT8230 for rivets.

3-Deburr

0.00

0.00

6

10-03-30

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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**NOTE:** Date & initial all entries

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March 10, 2010 1:29:51 PM



Page 2

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QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120  CNC Bend 1 CNC Delta 100 Bender	BENDING MACHINE - SKIDTUBES  Memo Bend as per Dwg D2351-041 using CNC Bender 1 and Folio FT011. Use Bend Program D2351-041.	0.00  0.00							 
130  QC Quality Control	QC5- Inspect part completeness to step on W/O  Memo	0.00  0.00							 
140  Large Fab Large Fab	Large Fab  Memo 1-Bevel Fwd and Aft end for welding 2-Weld Aft End Bracket per QSI 004 & Dwg D2351 using Welding Jig DT8033 A/RAluminum Rod <u>2110130</u> 3-Do not Grind Flush	0.00  0.00							 

W/O:		WORK ORDER CHANGES					
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Page 3

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QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150  QC Quality Control	QC9- Inspect visual per QSI004- Fusion Welds  Memo	0.00  0.00				6	0	BE	10/04/06
160  QC Quality Control	QC5- Inspect part completeness to step on W/O  Memo	0.00  0.00		Subloc		(x6)			
170  HandFinish Hand Finishing	Chemical Conversion Coat per QSI005 4.1  Memo	0.00  0.00		10/04/06		(x6)	0		

W/O:		WORK ORDER CHANGES					
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Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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March 10, 2010 1:29:51 PM



Page 4

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QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180	QC3- Inspect Part Finish	0.00							
QC	Memo	0.00	= 7 m, 10/04/06						
Quality Control									
190	Large Fab	0.00							
Large Fab	Memo	0.00	10.04.06						
Large Fab	1-Rivet Leg Assembly as per Dwg D2351								
200	QC5- Inspect part completeness to step on W/O	0.00							
QC	Memo	0.00	N/A						
Quality Control									

6X

6

10.04.06

N/A

W/O:		WORK ORDER CHANGES					
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Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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Page 5

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Reference:

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QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
210 	Large Fab	0.00							
Large Fab	Memo	0.00				6	0		
Large Fab	1-Weld Fwd End Plate per QSI 004 & Dwg D2351 A/RAluminum Rod <del>M111341</del>								
	2-Grind end cap flush per dwg D2351								
220 	QC9- Inspect visual per QSI004- Fusion Welds	0.00							
QC	Memo	0.00				6	10.04.08		
Quality Control									
230 	QC5- Inspect part completeness to step on W/O.	0.00							
QC	Memo	0.00				6			
Quality Control									

Scobyl's

6

W/O:		WORK ORDER CHANGES					
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March 10, 2010 1:29:51 PM



Page 6

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QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



Stop



Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Draw  
Number

Draw  
Rev.

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

240



HandFinish

Hand Finishing

Chemical Conversion Coat per QSI005 4.1

0.00

PR 10-4-8

(2) 0

Memo

0.00

250



Powdercoat

Powder Coating

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00

M 113170

del 10/4/09

(X6) 0

Memo

0.00

START TIME: 8:00AM  
OVEN TEMPERATURE: 320°  
FINISH TIME: 8:30AM

260



HandFinish

Hand Finishing

Pressure Wash per QSI005 4.3

0.00

wing walk.

Per QSI005

PR 10-4-9

(6)

Memo

0.00

M 113545

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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March 10, 2010 1:29:51 PM



Page 7

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Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run HoursDraw  
NumberDraw  
Rev.Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

270



QC

Quality Control

QC3- Inspect Part Finish

0.00

8.10/04/15

Memo

0.00

(46)

280



Packaging

Packaging

Pick Kit

0.00

Memo

0.00

Rec'd 4/12 (15) SL

290



QC

Quality Control

QC4- 100% Inspect kits for completeness

0.00

8.10/04/15

Memo

0.00

(46)

LH

**Dart Aerospace Ltd**

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
 Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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March 10, 2010 1:29:51 PM



Page 8

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Cust Item ID:

Required Date: 18/03/2010 Req'd Qty: 5.00



Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop



Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Draw  
Number

Draw  
Rev.

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

300



Packaging

Packaging

0.00

Memo

0.00

Identify and pack for shipping as per PPP D350-591-121

Location: 42

PPP Rev: 1

10-4-15 (65)

310



QC

Quality Control

QC21- Final Inspection - Work Order Release

0.00

Memo

0.00

10.104/19   
MF  
10-4-16

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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# Picklist Print

March 10, 2010 1:29:55 PM

Page 1

Work Order ID: 56805

Parent Item: D350-591-121

Parent Item Name: Heli-Access-Step, LH


Comments: IPP Rev: E ☐ 02.10.21 ☐ Re-format; Incorporated D2351-041 IPP ☐ KJ/RF  
IPP rev. F 06.02.23 added grinding EC

Start Date: 10/03/2010


Required Date: 18/03/2010

Start Qty: 5.00


Required Qty: 5.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D2244-116		Manufactured	No			110	Each	16.5000	2.6316			
 Step Extrusion												

*10.04.06*

Warehouse				Loc Qty		Loc Code	
Location							
Main Warehouse							
ST				16.5			
38023				16.5			
D2850-1		Manufactured	No	140	Each	16.0000	5.0000
 End Bracket							

*10.04.06*

Warehouse				Loc Qty		Loc Code	
Location							
Premier							
Mezz				16			
31408				6			
50267				10			
D2582		Manufactured	No	190	Each	31.0000	5.0000
 Step Leg Assembly							

*10.04.06*

Warehouse				Loc Qty		Loc Code	
Location							
Main Warehouse							
ST				31			
48090				4			
51343				16			
53634				11			

*24*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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March 10, 2010 1:29:55 PM

Page 2

Work Order ID: 56805

Parent Item: D350-591-121

Parent Item Name: Heli-Access-Step, LH


Comments: IPP Rev:E 02.10.21 Re-format; Incorporated D2351-041 IPP KJ/RF  
IPP rev. F 06.02.23 added grinding EC

Start Date: 10/03/2010

Required Date: 18/03/2010

Start Qty: 5.00

Required Qty: 5.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
MS20600-AD4W3		Purchased	No			190	Each	2,327.000	80.0000			
												
Cherry Rivets												

*10.03.07*

Warehouse  
Location

Loc Qty

Loc Code

Main Warehouse

ST321

2327

102929

37

104715

10

106375

312

107939

1000

111636

968

D2673-34

Manufactured No

210

Each

10.0000

5.0000



End Plate

*46*

*10.03.07*

Warehouse  
Location

Loc Qty

Loc Code

Main Warehouse

ST

10

54361

10

*6*

March 10, 2010 1:29:55 PM

Shop Packet Print

Page 2

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Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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March 10, 2010 1:29:55 PM

Page 3

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Comments: IPP Rev: ☐ 02.10.21 ☐ Re-format; Incorporated D2351-041 IPP ☐ KJ/RF  
IPP rev. F 06.02.23 added grinding EC

Start Date: 10/03/2010

Required Date: 18/03/2010

Start Qty: 5.00

Required Qty: 5.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
AN4-16A Bolt		Purchased	No			290	Each	156.0000	10.0000		10-3-14	

## Warehouse

## Loc Qty

## Loc Code

### Location

Main Warehouse

ST358

156

112969

54

114129

100

18949

2

290

f

240.7221

3.0000

D2856-400



Manufactured

No

Abraison Strip

## Warehouse

## Loc Qty

## Loc Code

### Location

Main Warehouse

ST403

240.7220842

50593

138.592084

52563

102.13

290

Each

0.0000

30.0000

AN960JD416



Purchased

No

Washer

111149008631  
QSI D17

March 10, 2010 1:29:55 PM

Shop Packet Print

Page 3

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March 10, 2010 1:29:55 PM

Page 4

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Comments: IPP Rev: E 02.10.21 Re-format; Incorporated D2351-041 IPP KJ/RF  
IPP rev. F 06.02.23 added grinding EC

Start Date: 10/03/2010

Required Date: 18/03/2010

Start Qty: 5.00

Required Qty: 5.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	--------------------------	---------------	----------------	--------



Lug

Warehouse	Loc Qty	Loc Code
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Main Warehouse

ST

4

51761

4

Main Warehouse

ST476

99

54755

99

Purchased

No

290

Each

687.0000

10.0000

AN3-37A



Bolt

Warehouse	Loc Qty	Loc Code
-----------	---------	----------

Main Warehouse

ST353

687

105425

187

111668

500

SD 10-4-14

6x

10-4-14

SD (6x)

12

March 10, 2010 1:29:55 PM

Shop Packet Print

Page 4

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Start Qty: 5.00

Required Qty: 5.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
MS21042L3 Nut		Purchased	No			290	Each	2,353.000	10.0000			

Warehouse  
Location

Loc Qty

Loc Code

Main Warehouse

ST300

2353

110844

35

111274

27

111668

58

112314

285

112385

228

113523

20

113537

700

113644

1000

Purchased

No

290

Each

160.0000

15.0000

Warehouse

Location

Loc Qty

Loc Code

Main Warehouse

ST357

160

113749

110

114108

50

AN4-13A  
Bolt

March 10, 2010 1:29:55 PM

Shop Packet Print

Page 5

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

March 10, 2010 1:29:55 PM

Page 6

Work Order ID: 56805

Parent Item: D350-591-121

Parent Item Name: Heli-Access-Step, LH

Comments: IPP Rev: E ☐ 02.10.21 ☐ Re-format; Incorporated D2351-041 IPP ☐ KJ/RF  
IPP rev. F 06.02.23 added grinding EC

Start Date: 10/03/2010

Required Date: 18/03/2010

Start Qty: 5.00

Required Qty: 5.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
MS21042L4		Purchased	No			290	Each	2,358.000	15.0000			



Nut

10-4-14 SD

Warehouse	Loc Qty	Loc Code
Location		
Main Warehouse		
ST300	2358	
102552	6	
104248	6	
110507	184	
111827	186	
113422	976	
114108	1000	



Lug

Manufactured No

290 Each 136.0000 5.0000

B56855 10-4-14 SD  
(C+)

Warehouse	Loc Qty	Loc Code
Location		
Main Warehouse		
ST	7	
50306	5	
51568	2	
Main Warehouse		
ST176	129	
55310	129	



Rubber Cushion

Manufactured No

290 Each 0.0000 10.0000

B56514 10-4-15 SD

March 10, 2010 1:29:55 PM

Shop Packet Print

Page 6

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

# Picklist Print

March 10, 2010 1:29:55 PM

Page 7

Work Order ID: 56805

Parent Item: D350-591-121

Parent Item Name: Heli-Access-Step, LH

Comments: IPP Rev: E ☐ 02.10.21 ☐ Re-format; Incorporated D2351-041 IPP ☐ KJ/RF  
IPP rev. F 06.02.23 added grinding EC

Start Date: 10/03/2010

Required Date: 18/03/2010

Start Qty: 5.00

Required Qty: 5.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
AN960JD10		Purchased	No			290	Each	0.0000	20.0000			



Washer



1114292 10-4-14 SP (L)

March 10, 2010 1:29:55 PM

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Page 7

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**DART**

DESIGN KE	DRAWN BY PH	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. D2351	REV. E SHEET 1 OF 2
DATE 05.11.14		TITLE HIGH FLOAT STEP ASSEMBLY	SCALE NTS
A	95.02.15	NEW ISSUE	
B	97.05.22	END CAPS CHANGED	
C	97.07.23	ADDED BUSHING AND FACING INFO	
D	98.12.17	CHANGED TO BEND, D2850 REPLACES D2357 & D2358, INCORP. DEO 9084	
E	05.11.14	UPDATE FINISHING NOTE	

**D2351 HIGH FLOAT STEP ASSEMBLY PARTS LIST**

Part No.	Description	QTY -041	QTY -042
D2351-041	High Float Step Assembly (LH)	X	
D2351-042	High Float Step Assembly (RH)		X
D2244-55.4	STEP EXTRUSION*	1	1
D2582	STEP LEG ASSEMBLY	1	1
D2673-34	STEP END PLATE	1	1
D2850-1	END BRACKET	1	
D2850-2	END BRACKET		1
MS20600AD4W3	RIVETS	16	16

\*cut per drawing

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SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER

NO. 56805

B-10-3-10

**RELEASED**  
05.11.28 #PH  
ECN 1105**UNDER REVIEW**

07.11.29 #

PER LIC# 263

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

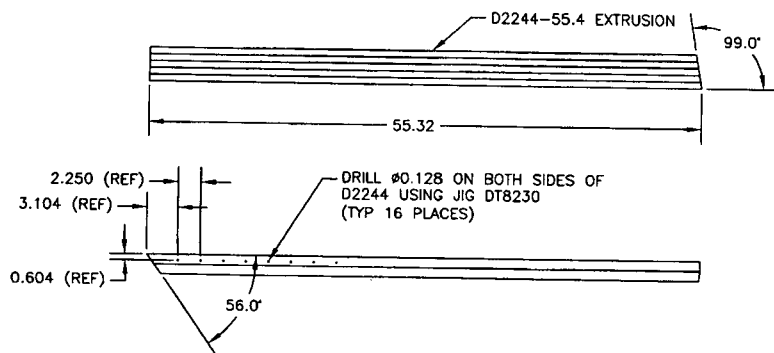
Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

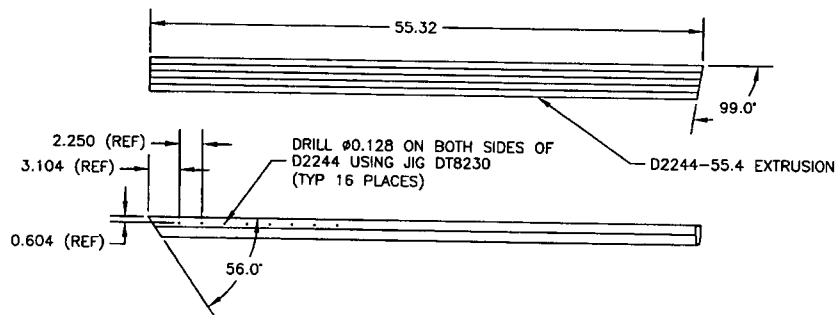
**NOTE:** Date & initial all entries



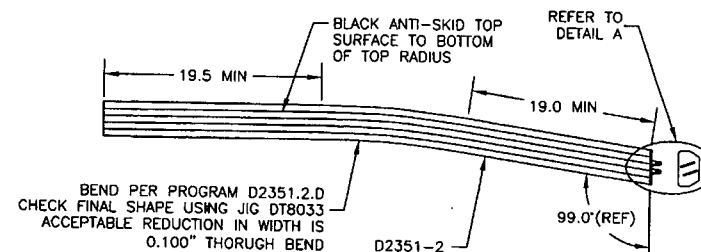
D2351-2 CUTTING/DRILLING DETAIL  
RIGHT STEP



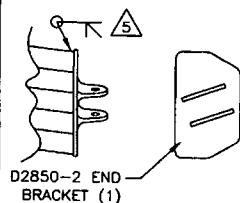
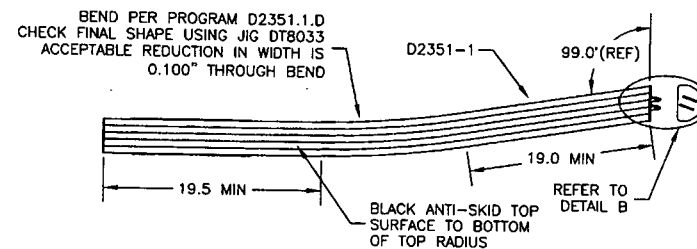
D2351-1 CUTTING/DRILLING DETAIL  
LEFT STEP



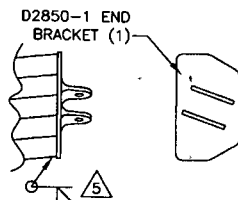
D2351-042 BENDING/ASSEMBLY DETAIL  
RIGHT STEP



D2351-041 BENDING/ASSEMBLY DETAIL  
LEFT STEP

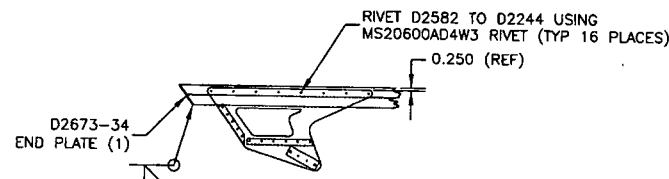


DETAIL A  
SCALE: 1:4



DETAIL B  
SCALE: 1:4

D2582 STEP LEG ASSEMBLY (1)



GENERAL NOTES

- 1) WELD PER DART QSI 004
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
POWDER COAT GLOSS WHITE (4.3.5.1) PER DART QSI 005 4.3  
BLACK ANTI-SKID PAINT PER DART QSI 005 4.4
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

△ CHAMFER D2244 EXTRUSION 0.075"x45° BEFORE WELDING D2850-1 OR D2850-2 IN PLACE. DO NOT GRIND FLUSH.

RELEASED  
05.11.28

UNDER REVIEW

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DESIGN KE	DRAWN BY FH	<b>DART</b> DART AEROSPACE LTD. HAWKESBURY, ONTARIO, CANADA
CHECKED #	APPROVED #	
DATE 05.11.14	DRAWING NO. D2351	REV. E SHEET 2 OF 2
	TITLE HIGH FLOAT STEP ASSEMBLY	SCALE 1:12

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

## 5. PARTS LIST

Qty -111A	Qty -113	Qty -115	Qty -117A	Qty -119	Qty -133	Part Number	Description
X						D350-591-111A	<b>Heli-Access-Step</b> ™, Long Step – High Skid
	X					D350-591-113	<b>Heli-Access-Step</b> ™, Short Step – High Skid
		X				D350-591-115	<b>Heli-Access-Step</b> ™, Short Step – Low Skid
			X			D350-591-117A	<b>Heli-Access-Step</b> ™, Pre-Flight Step
				X		D350-591-119	<b>Heli-Access-Step</b> ™, Long Step – Low Skid
					X	D350-591-133	<b>Heli-Access-Step</b> ™, Aft Maintenance Step
	1					D2310	STEP ASSEMBLY (HIGH-SHORT)
1						D2311	STEP ASSEMBLY (HIGH-LONG)
		1				D2354	STEP ASSEMBLY (LOW-SHORT)
				1		D2355	STEP ASSEMBLY (LOW-LONG)
					1	D2946-041	STEP ASSEMBLY (MAINTENANCE)
4	2	2	2	2		D2171	CLAMP
4	2	2	2	2		D2182B035	CUSHION
					4	D2230-1	MOUNTING LUG
					4	D2230-3	MOUNTING LUG
8	4	4	4	4		D2274	RADIUS BLOCK
			1			D2362-041	SUPPORT BRACKET
2	1			1		D2362-3	SUPPORT BRACKET
		1				D2362-5	SUPPORT BRACKET
2	1	1	1	1	2	D2856-400-720	ABRASION STRIP
					1	D2945	MOUNTING PLATE
2	2	2		2		AN3-37A	BOLT
					2	AN4-7A	BOLT
					4	AN4-11A	BOLT
					8	AN4-14A	BOLT
		4				AN4-16A	BOLT
8	4			4		AN4-20A	BOLT
1	1	1	4	1		AN4-22A	BOLT
4	4	4		4		AN960JD10	WASHER
10	6	2	4	6	14	AN960JD416	WASHER
		4				AN960JD416L	WASHER
2	2	2		2		MS21042L3	NUT
9	5	5	4	5	14	MS21042L4	NUT

Qty -121	Qty -122	Qty -123	Qty -124	Part Number	Description
X				D350-591-121	<b>Heli-Access-Step</b> ™, Short Step – High Skid, LH
	X			D350-591-122	<b>Heli-Access-Step</b> ™, Short Step – High Skid, RH
		X		D350-591-123	<b>Heli-Access-Step</b> ™, Short Step – Low Skid, LH
			X	D350-591-124	<b>Heli-Access-Step</b> ™, Short Step – Low Skid, RH
1				D2351-041	STEP ASSEMBLY (HIGH-SHORT, LH)
	1			D2351-042	STEP ASSEMBLY (HIGH-SHORT, RH)
		1		D2356-041	STEP ASSEMBLY (LOW-SHORT, LH)
			1	D2356-042	STEP ASSEMBLY (LOW-SHORT, RH)
1	1	1	1	D2230-1	MOUNTING LUG
1	1	1	1	D2230-3	MOUNTING LUG
1	1	1	1	D2856-400-720	ABRASION STRIP
2	2	2	2	AN3-37A	BOLT
3	3	3	3	AN4-13A	BOLT
4	4	4	4	AN960JD10	WASHER
6	6	6	6	AN960JD416	WASHER
2	2	2	2	MS21042L3	NUT
3	3	3	3	MS21042L4	NUT

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS D350-591 REV. G OR EARLIER  
AND  
INSTRUCTIONS OF CONTINUED AIRWORTHINESS ICA-D350-591 REV. 2 OR EARLIER  
REF CANADIAN STC: SH92-6  
REF FAA STC: SH967NE

For D350-591-121/-122/-123/-124/-133 steps, customers have the option of installing D2732-030 cushions under the D2230-1/-3 clamps to accommodate varying crosstube diameters and to improve fit. It is also acceptable to use longer or shorter AN4 bolts, and/or extra AN960JD416 washers under the nut to ensure 1.5 to 4 threads in safety. See Figure 1 on sheet 2 of this service instruction for reference.

For D350-591-121/-122 steps at CHG 005, D350-591-123/-124 steps at CHG 004, and D350-591-133 steps at CHG 003, the parts list of D350-591 Rev. G and ICA-D350-591 Rev. 2 is amended as follows:

**ADD:**

Qty -121	Qty -122	Qty -123	Qty -124	Qty -133	Part Number	Description
X					D350-591-121	Heli-Access-Step™, Short Step – High Skid, LH
	X				D350-591-122	Heli-Access-Step™, Short Step – High Skid, RH
		X			D350-591-123	Heli-Access-Step™, Short Step – Low Skid, LH
			X		D350-591-124	Heli-Access-Step™, Short Step – Low Skid, RH
				X	D350-591-133	Heli-Access-Step™, Aft Maintenance Step
2	2	2	2	8	D2732-030	CUSHION
2	2	2	2	8	AN4-16A	BOLT

The DSI-9459-011 kit is available for customers with earlier model D350-591-121/-122/-123/-124 steps. Longer AN4 bolts are provided to fasten the clamps. The DSI-9459-013 kit is available for customers with earlier model D350-591-133 steps.

Qty -011	Qty -013	Part Number	Description
X		DSI-9459-011	Rubber Cushion Kit (for -121/-122/-123/-124 steps)
	X	DSI-9459-013	Rubber Cushion Kit (for -133 steps)
2	8	D2732-030	CUSHION
2	8	AN4-16A	BOLT

CANADA  
DEPARTMENT OF TRANSPORT  
AIRCRAFT CERTIFICATION  
BRANCH  
DAO # 01-O-01

APPROVED  
BY: *[Signature]*  
D. SHEPHERD (DE # 02)

DATE: 09.06.24  
CERT. NO.: SH92-6  
ISSUE NO.: 11

B	AN4-16A WAS -17A FOR -013/-133 KIT	CP	09.06.24
A	NEW ISSUE	CP	09.04.17
REV.	DESCRIPTION	BY	DATE
DESIGN	<i>[Signature]</i>	<b>DART AEROSPACE LTD</b>	
DRAWN	<i>[Signature]</i>	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. B
MFG. APPR.	<i>[Signature]</i>	DSI 9459	SHEET 1 OF 2
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	OPTIONAL CLAMP MODIFICATIONS	NTS
DATE	09.06.24	COPYRIGHT © 2009 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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